IN THE SPECIFICATION:

Page 1, lines 3 to 7, replace the paragraph with the following amended paragraph.

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The invention relates to improvements in substrates, and in particular to new substrates having magnetic and visual security features[[,]] which provide security against imitations.

THE PRIOR ART

Page 4, line 36, insert the following topic heading.

SUMMARY OF THE INVENTION

Page 5, lines 29 to 32, replace the paragraph with the following amended paragraph.

A preferred embodiment of the present invention will now be described by way of example only, with reference to the accompanying drawings ~~in which:~~ .

BRIEF DESCRIPTION OF THE DRAWINGS

Page 7, lines 4 to 16, replace the paragraphs with the following amended paragraphs.

Figures 28 to ~~35~~ 32 are cross-sectional side elevations of further alternative substrates incorporating optically variable devices;

Figure ~~36~~33 is a cross-sectional side elevation of an alternative substrate to that of Figure 2, but with two demetallised layers, one on either side of the transparent magnetic media containing layer; and

Figures ~~37~~34 and ~~38~~35 are cross-sectional side elevations of further alternative substrates which are coded.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Page 10, lines 1 to 27 replace the paragraphs with the following amended paragraphs.

The thus-formed substrate may then be slit in register to form thin strips suitable for inclusion as security threads into banknotes or other security documents, such as credit, debit and other cards. Typical widths for security threads lie in the range 0.5mm to 50mm, and more preferably 1mm to 10mm. The use of the substrate of the present invention is not merely limited to use as security threads, but may also be used to provide other security media such as secure tear tapes for brand protection, or a secure substrate for the manufacture or holograms, labels, transfers, hang tags, certificates, bonds, cheques, banknotes and other documents of value. In particular, the substrate is particularly suitable for manufacturing plastics banknotes. When utilized as a

substrate for such applications, it is envisaged that an opaque ink receptive coating be applied over at least part of the substrate.

The secure substrate described above can be further enhanced as will be understood by those skilled in the art. Such enhancements include, but not limited to, the application of luminescent, thermochromic, and[[,]] photochromic materials and embossed optically-variable devices. Examples of how this might be achieved are described in EP-A-319157, GB-A-2274428, WO-A-00/54985, and WO-A-00/39391.

Page 12, line 27, insert the following new paragraph.

Alternatively, the varnish 2 may first be applied to the protective layer 5 and this construction laminated to the partially demetallised structure 3, 4.

Page 14, lines 1 to 8, replace the paragraph with the following amended paragraph.

As an alternative a high refractive index (HRI) layer (8) such as ZnS or a polymer liquid crystal layer can be applied ~~in preference to or~~ in addition to the partial metal layer (3, 4) as shown in figure ~~5~~ 10 to provide an iridescent effect in the metallic regions (3). However, a dark or black background layer will need to be located behind any liquid crystal layer to cause the colourshift effect.

Page 15, lines 14 to 36, replace the paragraphs with the following amended paragraphs.

It is also possible to produce a variant of the invention incorporating an optically variable device such as a hologram, Kinegram or Exelgram. Here an additional embossing lacquer (10) is applied on to the substrate and embossed to provide an embossed surface (11). The reflection enhancing layer used to form the partially metallised layer 3, 4 may be metal, as shown in Fig. 28 to 31~~, or an HRI layer, as shown in Figs. 32 to 34~~.

Figures 28 to 31 show alternative constructions for the optically variable device utilizing a metallic reflection-enhancing layer for the partially metallised layer 3, 4. ~~Figures 32 to 34 show alternative constructions for utilizing the HRI reflection enhancing layer.~~

Figure ~~35~~ 32 illustrates an alternative construction whereby the coated film (1, 2) is metallised and, selectively demetallised. An embossing lacquer (10) is applied, which is then embossed. An optional protective polymer layer(s) is applied to the embossed surface (11).

~~Example 11~~

~~Figures 2 illustrates a further alternative construction, which is a variant of that shown in Figure 1, whereby the polymer carried layer (1) has a metal layer applied thereto which is partially demetallised to form a~~

~~partially metallised surface (3, 4). The varnish (2) containing the magnetic material is then applied to the partially metallised surface (3, 4). An additional protective layer (5) may then applied over the layer of varnish (2). Alternatively, the varnish (2) may first be applied to the protective layer (5) and this construction laminated to the partially demetallised structure (3, 4).~~

Example ~~12~~11

In this example, as illustrated in Figure ~~36~~ 33, the substrate has two partially metallised layers (3, 4). This is achieved by partially demetallising the first carrier layer (1) and, in a separate process, partially demetallising a second additional carrier layer (5). The magnetic material containing varnish (2) is applied to the partially metallised surface (3, 4) of the first layer (1) and a laminating adhesive (12) applied to enable the second layer (5) with its demetallised surface (3, 4) to be adhered to the first layer (1).

Example ~~13~~12

This is an example of a coded thread as mentioned previously and as illustrated in Figure ~~37~~ 34. In this example an additional magnetic layer (10) is applied to the transparent magnetic media containing layer (2). The additional magnetic layer (10) is preferably discontinuous and also transparent, but incorporates a material of differing coercivity to that of layer (2). Although it is preferred that the layer (10) is transparent, a

non-transparent magnetic material may be used in layer 10. The additional layer (10) may also comprise several different magnetic materials printed sequentially to define a code, either abutting or overlapping to form a continuous layer.

Example ~~1~~413

This is a further example of a coded substrate, as illustrated in Figure ~~38~~ 35, in which the magnetic material containing varnish (2) is applied in a discontinuous manner to define a code. The code may be printed with several materials having different coercivities. In this example, the need for an additional magnetic layer is described in Example ~~13~~12 is removed. However, as with the previous examples, where using materials of differing coercivities, these can be printed in sequence either abutting or overlapping to form a continuous layer. In this Example numeral (13) denotes an uncoated magnetic region. In an alternative embodiment, the code does not need to be in register with the indicia.

In all the aforementioned examples it should be noted that, as mentioned in conjunction with Example ~~34~~ 12, the demetallised construction consisting of the carrier layer (1) and partially metallised surface (3, 4) can be formed separately from the transparent magnetic construction comprising the protective layer (5) with the magnetic

material containing varnish (2) and then laminated together using a suitable adhesive.